



# AFCTN Test Report 94-070

AFCTB-ID  
94-049



**TMSS Parsing Test**



**MIL-M-5096E Work Card**

**Document Type Definition**

**MAXIMA Corporation**

DISA Contract #DCA100-93-D-0065

**Quick Short Test Report**



19960822 082 27809661

**17 May 1994**



*Prepared for*  
Electronic Systems Center  
Air Force CALS Program Office  
HQ ESC/AV-2  
4027 Colonel Glenn Hwy Suite 300  
Dayton OH 45431-1672

**DTIC QUALITY INSPECTED 3**

**DISTRIBUTION STATEMENT A**

Approved for public release;  
Distribution Unlimited

**AFCTN Test Report**  
94-070

**AFCTB-ID**  
94-049

---

**TMSS Parsing Test  
MIL-M-5096E Work Card  
Document Type Definition**

**For:**

**MAXIMA Corporation  
DISA Contract #DCA100-93-D-0065**

**Quick Short Test Report**

**17 May 1994**

---

**Prepared By**

Air Force CALS Test Bed  
Wright-Patterson AFB, OH 45433

**AFCTB Contact**

Gary Lammers  
(513) 427-2295

**AFCTN Contact**

Mel Lammers  
(513) 427-2295

**DTIC QUALITY INSPECTED 3**

## DISCLAIMER

This document was prepared as an account of the work sponsored by the Air Force. Neither the United States Government, the Air Force, nor any of their employees makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, nor represents that its use would not infringe on privately owned rights. Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or the Air Force. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or the Air Force, and shall not be used for advertising or product endorsement purposes.

Available to the public from the  
National Technical Information Service  
U.S. Department of Commerce  
5285 Port Royal Road  
Springfield, VA 22161

This report and those involved in its preparation do not endorse any product, process, or company stated herein. Use of these means by anyone does not imply certification by the Air Force CALS Test Network (AFCTN).

---

# **Air Force CALS Test Bed**

## ***Notification of Test Results***

**17 May 1994**

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick Short Test Report (QSTR) evaluation of data submitted by:

### **MAXIMA Corporation**

Identified as follows:

Title:	<b>MIL-M-5096E, Work Card DTD Parsing Test</b>
Program:	<b>DISA</b>
Program Office:	<b>DISA</b>
Contract No.:	<b>DCA100-93-D-0065</b>
QSTR No.:	<b>AFCTB-ID 94-049</b>

Received on the following media:    **3.5" Diskette**

The results of the AFCTB Quick Short Test evaluation are as follows:

MIL-STD-1840A Media Format:	<b>N/A</b>
MIL-D-28000A IGES:	<b>N/A</b>
MIL-M-28001A SGML:	<b>Pass</b>
MIL-R-28002A Raster:	<b>N/A</b>
MIL-D-28003 CGM:	<b>N/A</b>

Formal results with associated disclaimer are documented and available from the AFCTB.

**Air Force CALS Test Bed  
HQ ESC/AV-2P  
4027 Colonel Glenn Highway, Suite 300  
Dayton, OH 45431-1672  
Phone: 513-257-3085      FAX: 513-257-5881**

---

## Contents

1.	Introduction.....	1
1.1.	Background.....	1
1.2.	Purpose.....	2
2.	Test Parameters.....	3
3.	1840A Analysis.....	4
3.1.	External Packaging.....	4
4.	SGML Analysis.....	4
4.1.	Exoterica Validator.....	5
4.2.	Exoterica XGML Normalizer.....	6
4.3.	Sema Mark-it.....	6
4.4.	Public Domain sgmls.....	6
5.	Conclusions and Recommendations.....	7
6.	Appendix A - Detailed SGML Analysis.....	8
6.1.	Exoterica Validator .....	8
6.2.	Exoterica XGMLNormalizer Parser.....	11
6.3.	Public Domain sgmls Log.....	11
6.4.	Sema Mark-it Log.....	12

## 1. Introduction

### 1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

## 1.2 Purpose

The purpose of this informal test is to analyze Air Force Document Type Definitions (DTDs) for SGML syntax, using several commercial and public domain SGML parsers, prior to placing them in the Defense Information Systems Agency (DISA) Asset Source for Software Engineering Technology (ASSET) repository.

## 2. Test Parameters

Test Plan: AFCTB 94-049

Date of  
Evaluation: 17 May 1994

Evaluator: George Elwood  
Air Force CALS Test Bed  
DET 2 HQ ESC/AV-2P  
4027 Colonel Glenn Hwy  
Suite 300  
Dayton OH 45431-1672

Data  
Originator: Kay Hill  
MAXIMA Corporation  
2372 Lakeview Drive  
Beavercreek OH 45431  
(513) 427-5888

Data  
Description: Technical Manual Test  
1 DTD

Data  
Source System: Text/SGML  
SOFTWARE  
Unknown

Evaluation Tools Used:

MIL-M-28001 (SGML)  
PC 486/50  
Exoterica XGMLNormalizer v1.2e3.2  
Exoterica Validator v2.2 ex1  
McAfee & McAdam Sema Mark-it v2.3  
Public Domain sgmls v1.1

Standards  
Tested: MIL-M-28001B

---



### 3. 1840A Analysis

#### 3.1 External Packaging

The 3.5" diskette was hand delivered to the Air Force CALS Test Bed (AFCTB). It was not enclosed in any type of container.

The files received by the AFCTB were not MIL-STD-1840A files. The files were not named per the standard conventions, as the stated purpose of the evaluation was the basic data structure.

### 4. SGML Analysis

The AFCTB has several parsers available for evaluating submitted DTD and text files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. These products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings unless specified in the report.

The goal was to configure the DTD under analysis as it would normally be used. However, for this analysis it was necessary to modify the DTD adding the "DOCTYPE doc [" statement to the start and the companion ">" to the end of the DTD under evaluation, as stated in the comments of the DTD. If the parser did not support a formal file pointing to the location of the ISO character sets, this was added.

The DTD is MIL-M-5096E, Appendix D, Work Cards, called for a companion MIL-M-38784C DTD. MIL-M-38784C, Amendment three DTD, delivered on the same diskette as the DTD to be evaluated, was used. This DTD was used without change except to insert the location of the ISO character set files.

<!-- MIL-M-5096E Work Card DTD -->

D096ED0.ORG ---> D784CB0.A3

---

The following notes apply to the parsing analysis as indicated in the ensuing paragraphs.

Note 1. Entity parameters defined more than once is a valid SGML construct. The warnings in this analysis do not indicate any problems.

Note 2. The occurrences of warnings "references defined, but not used," appeared because portions of the called DTD, i.e., MIL-M38784C, were not used. They were not used because the entity definitions of the DTD under analysis altered the execution path in the called DTD. The warnings in this analysis do not indicate any problems.

## 4.1 Exoterica Validator

The DTD file was evaluated using the *Exoterica Validator* exl parser. The basic DTD was modified by placing the concrete syntax file and "<!DOCTYPE doc [" at the start, and the "]">" at the end. The parser reported 51 errors which related to the missing instance and are not considered error for this analysis.

The parser reported 45 total warnings of two types. The first was parameter entity declared more than once. See Note 1 above.

```
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 37,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%shorttitleuse".
      <!ENTITY % shorttitleuse "IGNORE" >
      ~~~~~~
-->
```

The second type of warnings relate elements defined but not used in any content model. See Note 2 above.

```
<!-- **Warning** in "\xgml\9449.dtd", line 221:
      An element is not allowed in the document instance because it does not
      appear in any accessible content model or it is completely excluded.
      The element is "ADDRESS".
-->
```

## 4.2 Exoterica XGML Normalizer

The DTD file was parsed using the Exoterica *XGMLNormalizer* parser. The concrete syntax and "<!DOCTYPE doc [" were added to the start, and "]">" to the end of the file. No errors or warnings were issued by this utility.

## 4.3 Sema Mark-it

The DTD file was evaluated using McAfee & McAdam's *Sema Mark-it* v2.3 parser. The file was modified by adding the concrete syntax and "<!DOCTYPE doc [" to the start, and "]">" to the end of the file. The base line D784CB0.A3 file was used. The only change made to this file was to save it using UNIX format to remove the DOS end of file character. One error was reported and this relates to a missing instance. This is not considered an error for this report.

## 4.4 Public Domain sgmls

The DTD file was evaluated using the Public Domain *sgmls* parser version 1.0. The file was modified by adding the "<!DOCTYPE doc [" to the start, and "]">" to the end of the file as stated in the comments in the DTD. The basic D784CB0.A3 file was used as the point to file. This DTD remained modified to point to the ISO character sets. Twelve warnings were reported by the parser, all of which were duplicate definitions. See Note 1 above.

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 37 in declaration parameter 4:  
Duplicate specification occurred for "%shortitleuse"; duplicate ignored.

The following is the command line used to parse the DTD.

```
C:\EN450>sgmls concrete.syn 9444.dtd -f9444.log -c9444.cap  
-s -u -r -l -g -d -p -e
```

## 5. Conclusions and Recommendations

The file D096ED0.ORG, MIL-L-5096E, Appendix D, conforms to the SGML syntax of ISO Standard 8879, as required by the CALS MIL-M-28001B specification.

The errors, warnings, and comments reported by the parsers used in this evaluation do not indicate any syntactical variances, nor indicate any problem that would invalidate the effective application of this DTD.

---

## 6. Appendix A - Detailed SGML Analysis

### 6.1 Exoterica Validator

```
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 37,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%shortitleuse".
      <!ENTITY % shortitleuse "IGNORE" >
      ^^^^^^^^^^^^^^

-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 45,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%shortitle".
      <!ENTITY % shortitle " " >
      ^^^^^^^^^^

-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 107,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%frnt".
      <!ENTITY % frnt "(idinfo, warnpage?, chginsst?, lep, verstat?,
      ^^^^^

-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 138,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%step1con".
      <!ENTITY % step1con "(warning*, caution*, note*, para, note*),
      ^^^^^^

-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 141,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%step2con".
      <!ENTITY % step2con "(warning*, caution*, note*, para, note*),
      ^^^^^^

-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 144,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%step3con".
      <!ENTITY % step3con "(warning*, caution*, note*, para, note*),
      ^^^^^^

-->
```

---

```
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 147,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%step4con".
      <!ENTITY % step4con "(warning*, caution*, note*, para, note*)",
      ~~~~~~
-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 150,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%step5con".
      <!ENTITY % step5con "(warning*, caution*, note*, para, note*)",
      ~~~~~~
-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 153,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%step6con".
      <!ENTITY % step6con "(warning*, caution*, note*, para, note*)",
      ~~~~~~
-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 156,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%step7con".
      <!ENTITY % step7con "(warning*, caution*, note*, para, note*)" >
      ~~~~~~
-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 165,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%bodyele".
      <!ENTITY % bodyele "(chapter, chapter+, ddchapter?)" >
      ~~~~~~
-->
<!-- **Warning** in "i:\dtd\784c.dtd" (entity "%m38784c"), line 182,
      used in "\xgml\9449.dtd", line 157:
      A parameter entity name has been declared more than once.
      The entity is "%parazero".
      <!ENTITY % parazero "({titles;; warning*, caution*, note*, (para,
      ~~~~~~
-->
<!-- **Warning** in "\xgml\9449.dtd", line 221:
      An element is not allowed in the document instance because it does not
      appear in any accessible content model or it is completely excluded.
      The element is "ADDRESS".
-->
```

<<<<< EXTRA TEXT LINES REMOVED HERE >>>>>

The element is "APPENDIX".  
The element is "BRK".  
The element is "CHAPTER".  
The element is "CHGINSSHT".  
The element is "CHGLIST".  
The element is "CHGREC".  
The element is "DDCHAPTER".  
The element is "DDDESC".  
The element is "DDINDEX".  
The element is "DDINTRO".  
The element is "DDLIST".  
The element is "DDSHEET".  
The element is "DOC".  
The element is "DOCPART".  
The element is "FOLDOUT".  
The element is "FOLDSECT".  
The element is "GLOSSARY".  
The element is "INDEX".  
The element is "INSERTPG".  
The element is "INTRO".  
The element is "PGBRK".  
The element is "PGNO".  
The element is "PREFACE".  
The element is "REAR".  
The element is "REMOVEPG".  
The element is "SECTION".  
The element is "SHORTTITLE".  
The element is "SUBPARA1".  
The element is "SUBPARA2".  
The element is "SUBPARA3".  
The element is "VOLUME".  
The element is "WARNPAGE".

<<<< ERRORS FROM THIS POINT ON RELATE TO NO DOCUMENT INSTANCE AND ARE  
CONSIDERED ERRORS FOR THIS REPORT >>>>

<!-- \*\*Error\*\* in "\xgml\9449.dtd", line 222:  
The document instance must consist of at least one tag or data character.  
The following element can start: "DOCWC".

<<<< PART OF LOG FILE REMOVED HERE >>>>

<!-- \*\*Error\*\* in "\xgml\9449.dtd", line 222:  
An end tag that has been declared inomissible ("-") must not be omitted.  
The element is "DOCWC".

-->

<!-- 51 errors and 45 warnings reported. -->

---

## 6.2 Exoterica XGMLNormalizer Parser

No reported errors or warnings.

## 6.3 Public Domain sgmls Log

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 37 in declaration parameter 4:  
Duplicate specification occurred for "%shortitleuse"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 45 in declaration parameter 4:  
Duplicate specification occurred for "%shortitle"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 109 in declaration parameter 4:  
Duplicate specification occurred for "%frnt"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 139 in declaration parameter 4:  
Duplicate specification occurred for "%step1con"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 142 in declaration parameter 4:  
Duplicate specification occurred for "%step2con"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 145 in declaration parameter 4:  
Duplicate specification occurred for "%step3con"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 148 in declaration parameter 4:  
Duplicate specification occurred for "%step4con"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 151 in declaration parameter 4:  
Duplicate specification occurred for "%step5con"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 154 in declaration parameter 4:  
Duplicate specification occurred for "%step6con"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 156 in declaration parameter 4:  
Duplicate specification occurred for "%step7con"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 165 in declaration parameter 4:  
Duplicate specification occurred for "%bodyele"; duplicate ignored

sgmls: In file included at \ws\9449.dtd, line 85:  
Warning at i:\dtd\784c.dtd, line 183 in declaration parameter 4:  
Duplicate specification occurred for "%parazero"; duplicate ignored



## 6.4 Sema Mark-it Log

```
<!--*** file:C:\XGML\9449.DTD line:221 pos:6918  
Document entity ended illegally  
(or illegal end of entity in the main document)-->
```